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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,262	06/12/2000	KIYOHICO UCHIDA	99807MN	3573

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YOUNG & THOMPSON  
745 SOUTH 23RD STREET 2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 05/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/486,262

Applicant(s)

UCHIDA ET AL.

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.                      6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 2, and 12** are rejected under 35 U.S.C. 102(b) as being anticipated by Keller (4,583,272).

Keller teaches a rotary shaft **8**, and a cylindrical roller portion **10** integrated with an outer periphery of the rotary shaft **8**, wherein the cylindrical roller comprises a mixture of a hydraulic composition (abstract, line 10-11). Note the two shaft portions **8, 9** (fig. 4). Note that Keller teaches press molding a mixture of hydraulic composition (fig. 12).

3. **Claims 1 and 2** are rejected under 35 U.S.C. 102(b) as being anticipated by Takei et al. (EP 0 734 873 A2).

Takei et al. teach a rotary shaft **2**, and a cylindrical roller portion **3** integrated with an outer periphery of the rotary shaft **2**, wherein the cylindrical roller comprises a mixture of a hydraulic composition (page 1, line 4, first column). Note the two shaft portions **12** (fig. 3).

4. **Claims 1 and 2** are rejected under 35 U.S.C. 102(b) as being anticipated by Mino et al. (DE 3617316 A1).

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Mino et al. teach a paper feed roller comprising: a rotary shaft (abstract, line 3), and a cylindrical roller portion (abstract, line 4) integrated with an outer periphery of the rotary shaft (abstract, line 3), wherein the cylindrical roller comprises a mixture of a hydraulic composition (abstract, line 9).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 3-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mino in view of Fuchs et al. (5,257,965).

Mino teaches the invention cited above with the exception of the cylindrical roller portion being formed by connecting a plurality of cylindrical molded bodies in a direction of the rotary shaft.

Fuchs et al. teach a cylindrical roller portion **1** being formed by connecting a plurality of cylindrical molded bodies **4** in a direction of the rotary shaft **3**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Mino with the cylindrical roller portion formed by connecting a plurality of cylindrical molded bodies in a direction of the rotary shaft, in light of the teachings of Fuchs et al., in order to provide roller sections that can be easily replaced without replacing

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the entire roller body. Note that Fuchs et al. teach a connecting core rod **14** extending between two cylindrical bodies **4**, the end portions have interengaging shapes **5**.

With respect to Claims 6 and 7, Mino/Fuchs et al. teach the invention cited above with the exception of using the claimed composition.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the claimed composition, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Lashin*, 125 USPQ 416. Furthermore, it would have been a matter of obvious design choice, at the time of the invention, to have used the claimed composition, because applicant has not disclosed that the claimed composition provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the claimed composition or the hydraulic composition taught by Mino because both compositions perform the same function of transferring paper.

7. **Claims 8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mino in view of Fuchs et al. and Rebres et al. (5,267,008).

Mino teaches a method for producing a paper feed roller, comprising the steps of: forming a cylindrical molded body of a hydraulic composition (abstract, line 9), releasing, curing and hardening the molded body (these are inherent steps in forming a hydraulic composition), inserting a rotary shaft (abstract, line 3) through the hole of the molded body.

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Mino teaches the invention cited above with the exception of forming a plurality of cylindrical bodies having a hole at a central portion by press molding, and connecting adjacent cylindrical molded bodies, and thereby integrally forming a cylindrical roller portion around an outer peripheral surface of the rotary shaft.

Fuchs et al. teach forming a plurality of cylindrical bodies **4** having a hole at a central portion and connecting adjacent cylindrical molded bodies **4**, and thereby integrally forming a cylindrical roller portion **1** around an outer peripheral surface of the rotary shaft **3**.

Rebres et al. teach press molding individual cylindrical bodies (col. 4, lines 17-20).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Mino with the steps of forming a plurality of cylindrical bodies having a hole at a central portion and connecting adjacent cylindrical molded bodies, and thereby integrally forming a cylindrical roller portion around an outer peripheral surface of the rotary shaft, in light of the teachings of Fuchs et al., in order to ., in order to provide roller sections that can be easily replaced without replacing the entire roller body.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Mino/Fuchs et al. with the step of press molding the cylindrical bodies, in light of the teachings of Rebres et al., in order to form individual roller sections that are identical.

8. **Claims 12-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mino in view of Keller.

Mino teaches the invention cited above with the exception of press molding and

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arranging two rotary shaft portions to be concentric with an outer peripheral surface of the cylindrical roller portion.

Keller teaches press molding (fig. 12) and arranging two rotary shaft portions 8, 9 (fig. 4) to be concentric with an outer peripheral surface of the cylindrical roller portion.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Mino with the steps of press molding and arranging two rotary shaft portions to be concentric with an outer peripheral surface of the cylindrical roller portion, in light of the teachings of Keller, in order to form the desired shape of the roll and in order to provide separate roller supports that can rotate the roll and reduces the weight of the roll by providing separate shaft portions instead of a roll portion that runs through the entire roller.

With respect to Claim 14, official notice is taken that it is well known in the art to form a roller end by threading the roller end and then screwing shaft portions.

9. **Claims 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mino in view of Keller as applied to **Claim 12** above, and further in view of Fuchs et al.

Mino/Keller teach the invention cited above with the exception of forming a plurality of cylindrical bodies and connecting the molded bodies together.

Fuchs et al. teach forming a plurality of cylindrical bodies and connecting the bodies together 4.

It would have been obvious to one of ordinary skill in the art, at the time of the invention,

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to have provided the invention of Mino/Keller with the steps of forming a plurality of cylindrical bodies and connecting the molded bodies together, in light of the teachings of Fuchs et al., order to provide roller sections that can be easily replaced without replacing the entire roller body.

10. **Claims 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rebres et al. (5,267,008) in view of Yamamoto et al. (5,649,362).

Rebres et al. teach forming a plurality of molded bodies **81, 82** each having a hole at a central portion by press molding a composition of a hydraulic composition, inserting a rotary shaft **83** through the holes of the plurality of cylindrical bodies, connecting adjacent molded bodies, and forming a cylindrical shaped body through curing and hardening the connected molded bodies, so as to integrally form a cylindrical roller portion around an outer peripheral surface of the rotary shaft.

Rebres et al. teach the invention cited above with the exception of using green bodies and releasing the green bodies.

Yamamoto et al. teach using green bodies and releasing the green bodies (col. 5, lines 55-59).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Rebres et al. with the step of using green bodies and releasing the green bodies, in light of the teachings of Yamamoto, in order to provide a roller body that has little defects (col. 5, line 67).



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11. **Claims 18-21 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rebres et al. in view of Yamamoto et al. and Takei (EP 0 734 873 A2).

Rebres et al. teach the invention cited above with the exception of using green bodies and releasing the green bodies.

Yamamoto et al. teach using green bodies and releasing the green bodies (col. 5, lines 55-59).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Rebres et al. with the step of using green bodies and releasing the green bodies, in light of the teachings of Yamamoto, in order to provide a roller body that has little defects (col. 5, line 67).

Rebres et al./Yamamoto et al. teach the invention cited above with the exception of having two shaft portions and curing and hardening the roller portion while arranged on the rotary shaft.

Takei teaches two shaft portions and curing and hardening the roller portion while arranged on the rotary shaft (fig. 3).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Rebres et al./Yamamoto et al. with two shaft portions and curing and hardening the roller portion while arranged on the rotary shaft, in light of the teachings of Takei, in order to reduce the weight of the shaft portion and in order to accurately align the shaft during curing. Official notice is taken that it is well known to use threads to secure a shaft to a roller body.

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12. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Rebres et al. in view of Yamamoto and Takei as applied to Claim 19 above, and further in view of Fuchs et al.

Rebres et al./Yamamoto/Takei teach the invention cited above with the exception of having a connecting core rod.

Fuchs et al. teach a connecting core rod 6.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Rebres et al./Yamamoto/Takei with a connecting core rod, in light of the teachings of Fuchs et al., in order to securely fasten the roll sections together.

#### ***Response to Arguments***

13. Applicant's arguments with respect to Claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer

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Service at (703) 306-5648, or fax (703) 872-9301 or by email to

CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Thursday and the second Friday of the bi-week, between 9am-6pm.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

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**MJ**

May 6, 2002



  
S. THOMAS HUGHES  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700